SITE SPECIFIC ALTERNATIVE PRACTICE
CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Jacob Beigel, Cedar Hills Logging/ Doug Salsbury
Proposed Implementation Date:	December 15, 2011
Proponent:	Jacob Beigel
Location:	Sections 4,17,20, T4N, R4W
County:	Jefferson
Land Owner:	Doug Salsbury
HRA #:	22-B-40484

I. TYPE AND PURPOSE OF ACTION

A. **Type of Action: SMZ Alternative Practice:**

Proponent is requesting an SMZ Alternative Practice to Rule 4:(36.11.304), *Operation of Equipment in the SMZ.*

Jacob Beigel, Cedar Hills Logging is proposing a timber harvest on Doug Salsbury property which is located near Boulder City, Montana. Lodgepole and ponderosa pine damaged by mountain pine beetle (MPB) has been marked for removal as well as Douglas-fir.

To capture lost timber value, reduce fuel loading on the landscape, and to increase health and vigor of Douglas-fir, the proponent would like to:

1. Full-length grapple skid across a Class-1 stream channel at potentially five locations. Installation of a temporary log bridge at each location would fully suspend log material above the stream channel.

   Equipment would enter and exit the stream channel at right angles, getting into, and out of the SMZ as quickly as possible.

   Operational period would be during frozen ground conditions to reduce potential soil disturbance in the SMZ. All bridge material/structure would be removed from the SMZ prior to spring break-up each year.

   When harvesting operations are completed, if soil disturbance has occurred in the SMZ along the approaches to the crossing sites, they should be slash-filtered and grass seeded. This should prevent sediment runoff into the stream channel.

B. **Purpose of Action: Timber Harvest**

Proponent has put forth a timber harvest to mitigate impacts to private lands as a result of damage caused by the MPB, as well as increasing forest health and vigor.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:
Provide a brief chronology of the scoping and ongoing involvement for this project.

Proponent may need to obtain a 310-permit from the Jefferson County Conservation District to place a temporary bridge in the Class-1 stream channel.

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

A 310-permit from the Jefferson County Conservation District may be required.

3. ALTERNATIVES CONSIDERED:

3.1 Alternative "A": Not approve Alternative Practice (No Action)

Proposed SMZ Alternative Practice would not be approved. Current MPB conditions would most likely increase, resulting in significant damage to the remaining non-infested lodgepole, ponderosa pine, and spruce. Douglas-fir would not be thinned increasing potential impacts by western spruce budworm. The proposed forest management and harvesting actions would be abandoned.

3.2 Alternative "B": Alternative as Proposed

Allow SMZ Alternative Practices as proposed with additional mitigation measures.

Equipment Operation: To facilitate harvesting operations being able to access the proposed harvest area, ***an Alternative Practice*** to operate wheeled or tracked equipment in the SMZ (at designated crossing sites as identified on the attached map) would be allowed under the following conditions:

1. Operating period should be during periods of frozen ground conditions to prevent soil disturbance.
2. Disturbed or exposed soil would be grass seeded to provide a vegetative filter to trap sediment.
3. A temporary bridge, using native timber found on site would be used at potentially five locations. These structures would fully suspend log material above the stream channel.
4. Equipment would enter, and exit the stream channel at right angles, getting into and out of the SMZ as quickly as possible.
5. Structures would be remove upon completion of timber sale or prior to spring runoff.
6. If necessary, a slash-filter windrow would be constructed on each side of the stream channel at all crossing locations. They would be built approximately 10' from banks edge to reduce potential sediment from reaching stream channel.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.

Harvest operations should be done during frozen ground conditions to prevent rutting. Degradation to the soil should be minimal due to the relatively small amount of forest products being cut. Mitigation measures such as grass seeding exposed soil areas should reduce the potential of sediment runoff.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.

Is it possible that implementing this Alternative Practice would impact the integrity of the SMZ and these specific functions?

1. Ability to act as an effective sediment filter.
2. Ability to provide shade to regulate stream temperature.
3. Protection of stream channel and banks.
4. Ability to provide large woody debris for eventual recruitment into the stream to maintain riffles, pools and other elements of channel stability.
5. Promotes floodplain stability.

The proposed project would be implemented during frozen ground conditions and should not adversely impact the six functions of a SMZ, as identified in the SMZ law (77-5-301[1] MCA).

1. Harvest operation would take place during frozen ground conditions to prevent soil rutting. Because of this and the small amount of wood being harvested, minimal disturbance to the soil is expected. If soil displacement would happen, the area in question would be grass seeded immediately following the harvest to reestablish vegetation.

2. No timber harvesting would take place in the SMZ, other than the potential removal of a few trees along the skid trail route to provide passage.

3. The use of a temporary bridge should provide adequate protection to the streambed and banks by providing a ridged structure to cross over.

4. Ample tree/shrub material should be maintained to provide future recruitment into stream channel to maintain riffles, pools, and other element of channel structure as no timber harvesting will take place in the SMZ.

5. Grass seeding disturbed soil locations and maintaining minimum tree retention requirements on a majority of this ownership should provide ample floodplain stability.

6. AIR QUALITY:

What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

None.

7. VEGETATION COVER, QUANTITY AND QUALITY:

What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.

Implementation of these alternatives practices with proposed mitigation measures should not dramatically impact any vegetative communities within the SMZ.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:
Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.
Would implementing this Alternative Practice impact the ability of the SMZ to support diverse and productive aquatic and terrestrial habitats?

Mountain pine beetle is prevalent in mature lodgepole and ponderosa pine and western spruce budworm can be found in the Douglas-fir. Implementation of this alternative practice in and of itself should not dramatically impact aquatic and terrestrial habitats.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:
Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.

Due to the relatively small nature of the proposed timber harvest, impacts are not expected. The proponent is responsible for identifying federally listed threatened or endangered species or habitat and takes responsibility for appropriate mitigation measures.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:
Identify and determine effects to historical, archaeological or paleontological resources.

None.

11. AESTHETICS:
Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.

None.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:
Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.

None.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:
List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

None.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:
Identify any health and safety risks posed by the project.

None.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:
Identify how the project would add to or alter these activities.

None.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:
Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.

None.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:
Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

None.

18. DEMAND FOR GOVERNMENT SERVICES:
Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services.

None.

19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:
List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

None.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:
Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.

None.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:
Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.

None.

22. SOCIAL STRUCTURES AND MORES:
Identify potential disruption of native or traditional lifestyles or communities.

None.

23. CULTURAL UNIQUENESS AND DIVERSITY:
How would the action affect any unique quality of the area?

None.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:
Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

None.

EA Checklist Prepared By:	**Name:**	Shawn Morgan	**Date:**	12-15-2011
	Title:	Helena Unit Forester		

V. FINDING

25. ALTERNATIVE SELECTED:

An ***Alternative Practice*** to operate wheeled or tracked equipment in the SMZ (at designated crossing sites as identified on the attached map) would be allowed under the following conditions:

1. Operating period should be during periods of frozen ground conditions to prevent soil disturbance.
2. Disturbed or exposed soil would be grass seeded to provide a vegetative filter to trap sediment.
3. A temporary bridge, using native timber found on site would be used at potentially five locations. These structures would fully suspend log material above the stream channel.
4. Equipment would enter, and exit the stream channel at right angles, getting into and out of the SMZ as quickly as possible.
5. Structures would be remove upon completion of timber sale or prior to spring runoff.
6. If necessary, a slash-filter windrow would be constructed on each side of the stream channel at all crossing locations. They would be built approximately 10' from banks edge to reduce potential sediment from reaching stream channel.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

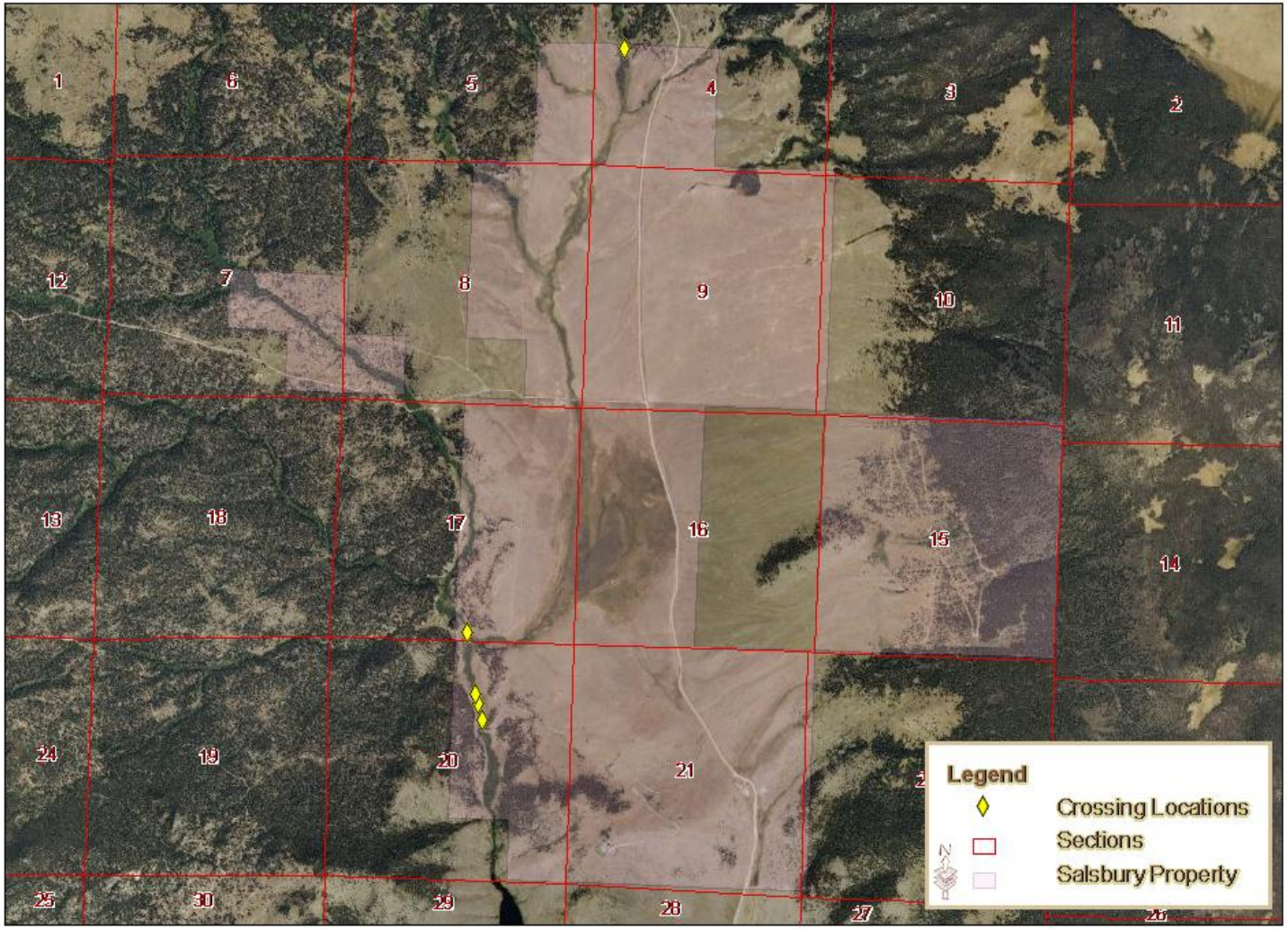
Measures Recommended To Mitigate Potential Impacts: None expected. See Section 25 of this document, mitigation measures.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

		EIS		More Detailed EA	**x**	No Further Analysis

EA Checklist Approved By:	**Name:**	D.J. Bakken		
	Title:	Helena Unit Manager		
Signature:			**Date**:	12/21/2011

Cedar Hills Logging/Doug Salsbury Property
AP-CLO-06-2011



Section 4,17,20 T4N, R4W

0.5 0.25 0 0.5 1:35,000 1.5 2 Miles

Mapped By: Shawn Morgan, DNRC Helena Unit 12/15/2011


09:58 13-12-2011
Lat: 46° 7' 49" N Lon: 112° 8' 59" W


09:16 13-12-2011
Lat: 46° 5' 25" N Lon: 112° 7' 38" W


09:17 13-12-2011
Lat: 46° 5' 27" N Lon: 112° 7' 39" W


09:25 13-12-2011
Lat: 46° 5' 40" N Lon: 112° 7' 43" W


09:33 13-12-2011
Lat: 46° 5' 21" N Lon: 112° 7' 37" W